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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,253	04/25/2005	Jun-Hyun Chun	51876P737	8754

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EXAMINER

BERNSTEIN, ALLISON

ART UNIT PAPER NUMBER

2824

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/511,253

Applicant(s)

CHUN, JUN-HYUN

Examiner

Allison Bernstein

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-23, 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 24-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/11/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: Search History.

### **DETAILED ACTION**

Claims 1-28 are pending in the application.

#### ***Information Disclosure Statement***

Acknowledgment is made of applicant's Information Disclosure Statement (IDS), Form PTO-1449, filed 11 January 2005. The information therein was considered.

#### ***Drawings***

Figure 4A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

The disclosure is objected to because of the following informalities:

On page 6 line 16, "wire-bonded each other..." should be replaced with --wire-bonded to each other--.

Also on page 16 lines 36, "the first embodiment of the preset" should be replaced with -- the first embodiment of the present--.

There are other grammatical errors within the claims that examiner has noticed. Therefore, applicant is advised to correct other grammatical errors that he may become aware of within the specification and elsewhere in the application.

Appropriate correction is required.

### ***Claim Objections***

Claims 1, 24 and 25 are objected to because of the following informalities:

On page 16 line 6, "to be" should be replaced with --being--.

Also on page 16 line 8, "the" at the end of the line should be deleted.

On page 20 line 17, "a 1<sup>st</sup> X 3<sup>rd</sup> column region" should be replaced with --a 1<sup>st</sup> row X 3<sup>rd</sup> column region--. Similar corrections should be made in lines 22, 27 and 32.

On page 21 line 4, "a X-decoder" should be replaced with --an X-decoder--.

There are other grammatical errors within the claims that examiner has noticed. Therefore, applicant is advised to correct other grammatical errors that he may become aware of within the claims and elsewhere in the application.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 24-26** are rejected under 35 U.S.C. 102(b) as being anticipated by Ong et al. (5,999,480).

3. **Regarding claim 24**, Ong et al. disclose a semiconductor memory device having a semiconductor memory chip divided into 18 regions having an equal area in a 3 rows X 6 columns array, the semiconductor memory chip comprising: a first memory bank (12 in figure 6) including memory blocks arranged at one region selected from a 2<sup>nd</sup> row X 1<sup>st</sup> column region, a 2<sup>nd</sup> row X 2<sup>nd</sup> column region and a 2<sup>nd</sup> row X 3<sup>rd</sup> column region and at a 1<sup>st</sup> row X 1<sup>st</sup> column region, a 1<sup>st</sup> row X 2<sup>nd</sup> column region and a 1<sup>st</sup> row X 3<sup>rd</sup> column region; a second memory bank (below 12 in figure 6) including memory blocks arranged at one region selected from a 2<sup>nd</sup> row X 1<sup>st</sup> column region, a 2<sup>nd</sup> row X 2<sup>nd</sup> column region and a 2<sup>nd</sup> row X 3<sup>rd</sup> column region and at a 3<sup>rd</sup> row X 1<sup>st</sup> column region, a 3<sup>rd</sup> row X 2<sup>nd</sup> column region and a 3<sup>rd</sup> row X 3<sup>rd</sup> column region; a third memory bank (to the right of 12 in figure 6) including memory blocks arranged at one region selected from a 2<sup>nd</sup> row X 4<sup>th</sup> column region, a 2<sup>nd</sup> row X 5<sup>th</sup> column region and a 2<sup>nd</sup> row X 6<sup>th</sup> column region and at a 1<sup>st</sup> row X 4<sup>th</sup> column region, a 1<sup>st</sup> row X 5<sup>th</sup> column region and a 1<sup>st</sup> row X 6<sup>th</sup> column region; a fourth memory bank (diagonal from 12 in figure 6)

including memory blocks arranged at one region selected from a 2<sup>nd</sup> row X 4<sup>th</sup> column region, a 2<sup>nd</sup> row X 5<sup>th</sup> column region and a 2<sup>nd</sup> row X 6<sup>th</sup> column region and at a 3<sup>rd</sup> row X 4<sup>th</sup> column region, a 3<sup>rd</sup> row X 5<sup>th</sup> column region and a 3<sup>rd</sup> row X 6<sup>th</sup> column region; and pads and control blocks (22 in figure 6) arranged at one region selected from the 2<sup>nd</sup> row X 1<sup>st</sup> column region, the 2<sup>nd</sup> row X 2<sup>nd</sup> column region, the 2<sup>nd</sup> row X 3<sup>rd</sup> column region, the 2<sup>nd</sup> row X 4<sup>th</sup> column region, the 2<sup>nd</sup> row X 5<sup>th</sup> column region and the 2<sup>nd</sup> row X 6<sup>th</sup> column region.

4. **Regarding claim 25**, Ong et al. disclose the semiconductor device as recited in claim 24, wherein a X-decoder (30 in figure 6, see also 30 in figure 2) between the neighboring memory blocks in the same memory bank is shared each other.

5. **Regarding claim 26**, Ong et al. disclose the semiconductor device as recited in claim 24, wherein the pads (22 in figure 6) are arranged between the first and second banks and the third and fourth banks (see figure 6).

#### ***Allowable Subject Matter***

6. **Claims 1-23 and 27-28** are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

8. **Regarding claims 1 and 27**, the prior art of record fails to teach or suggest the claimed limitations in combination, namely, that each memory bank has a non-rectangular shape. **Claims 2-23 and 28** depend on claims 1 and 27, respectively.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dosaka et al. (US 6,151,269) is cited to teach memory banks with shared row decoders. Kyung et al. (US 2003/0076702), Heightley et al. (US 6,741,488), and Yoo (US 5,970,002) are cited to teach memory banks with different size memory blocks.

When responding to this office action, applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner in locating appropriate paragraphs.

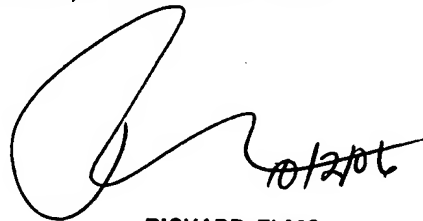
A shortened statutory period for response to this action is set to expire three months and zero days from the date of this letter. Failure to respond within the period for response will cause this application to become abandoned (see MPEP 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allison Bernstein whose telephone number is 571-272-9011. The examiner can normally be reached on Monday-Friday 7AM-4PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on 571-272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AB



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